IN THE CLAIMS

Claims 1-2 and 22-37 submitted March 23, 2004 have not been entered. Claims 22-39 are pending as of December 19, 2003. Please cancel claims 22-39 and add new claims 40-58.

Claim 40 (new): A fusion protein comprising a selenocysteine-containing peptide covalently linked to a surface protein positioned on an amplifiable particle.

Claim 41 (new): A fusion protein of claim 40, wherein the amplifiable genetic particle is selected from a phage, a polysome, a virus, a cell or a spore.

Claim 42 (new): A fusion protein according to claim 40, wherein the selenocysteine-containing peptide is a recombinant protein wherein the selenocysteine is located at a predetermined, unique site.

Claim 43 (new): A fusion protein according to claim 40, wherein the covalent linkage between the selenocysteine-containing peptide and the surface protein comprises a native peptide bond.

Claim 44 (new): A fusion protein according to claim 40, wherein the peptide is expressed by a DNA having a TGA codon and a part or all of a selenocysteine insertion sequence.

Claim 45 (new): A fusion protein according to claim 44, wherein the selenocysteine insertion sequence is located adjacent to one or more nucleotides from the TGA codon.

Claim 46 (new): A fusion protein according to claim 42, wherein the selenocysteine is flanked on either or both sides by one or more randomized amino acid.

Claim 47 (new): A fusion protein according to claim 40, wherein the selenocysteine in the peptide is positioned adjacent to one side of one or more randomized amino acids, the one or more randomized amino acids being flanked on a second side by a cysteine.

Claim 48 (new): A fusion protein according to claim 44, wherein the selenocysteine insertion sequence is obtained from the group consisting of eubacteria, eukarya and archea.

Claim 49 (new): A fusion protein according to claim 40, wherein the selenocysteine in the peptide is capable of chemical derivatization of the selenol group.

Claim 50 (new): A fusion protein according to claim 49, wherein the chemical derivatization results from a nucleophilic substitution reaction.

Claim 51 (new): A fusion protein according to claim 49, wherein the chemical derivatization results from an oxidation reaction.

Claim 52 (new): A fusion protein according to claim 49, wherein the chemical derivatization results from a metal coordination reaction.

Claim 53 (new): A fusion protein according to claim 49, wherein a product of chemical derivatization of the selenocysteine in the peptide is a chemical functionality selected from the group consisting of enzyme substrates, enzyme cofactors, enzyme inhibitors, receptor ligands and cytotoxic agents.

Claim 54 (new): A fusion protein according to claim 42 wherein the selenocysteine-containing peptide further comprises an enzyme substrate or is modified at the selenocysteine to form an enzyme substrate.

Claim 55 (new): A fusion protein according to claim 54, wherein the enzyme substrate forms a reaction product in the presence of an enzyme and the enzyme substrate is located on the surface of the amplifiable genetic particle.

Claim 56 (new): A fusion protein of claim 55, wherein the reaction product is capable of binding to an affinity substrate.

Claim 57 (new): A fusion protein, according to claim 55, wherein the recombinant protein is selected from a library of variants of a single enzyme, wherein each variant contains one or more amino acid substitutions relative to the native enzyme.

Claim 58 (new): A fusion protein according to claim 55, wherein the recombinant protein is selected from an expressed c-DNA library.